

**REMARKS**

The applicant respectfully requests reconsideration in view of the amendment and the following remarks. Support for amended claim 24 can be found in claim 24. The applicant has amended claim 49 as suggested by the Examiner in order to overcome the claim objection. Upon determination of allowance the applicant respectfully request that the remaining withdrawn claims be allowed since these claims all require the features of claim 24.

The rejection of claims 24-27, 41-44 and 47 remain unpatentable over WO 99/32537 (Allen) (translation U.S. 6,630,566). Claim 49 is objected to for informalities. We will amend claim 49 as suggested by the Examiner. Claims 24-27, 41-44 and 48-50 are rejected under 35 U.S.C. 102(b) as being anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Allen. Claims 24-27, 41-44 and 48-50 are rejected under 35 U.S.C. 103(a) as being unpatentable over Oguma (U.S. 2003/0165713) in view of Allen. The applicant respectfully traverse these rejections.

**Prior art rejections**

Claims 24-27, 41-44 and 48-50 are rejected under 35 U.S.C. 102(b) as being anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Allen. Claims 24-27, 41-44 and 48-50 are rejected under 35 U.S.C. 103(a) as being unpatentable over Oguma in view of Allen.

According to claim 24, "an oligomer or polymer comprising a first repeat unit and a second repeat unit that is different from the first repeat unit, is claimed, wherein the first repeat

unit is represented by formula (I) and the second repeat unit and optionally further repeat units are selected from optionally substituted phenyl, fluorene, spirobifluorene, indenofluorene, heteroaryl and/or dihydrophenanthrene.

Consequently, claim 24 is directed to a copolymer comprising a first repeat unit of formula (I) and at least a **second repeat unit selected from phenyl, fluorene, spirobifluorene, indenofluorene, heteroaryl, and / or dihydrophenanthrene.**

The applicant believe that Allen does not disclose copolymers comprising as a second repeat unit a unit selected from **phenyl, fluorene, spirobifluorene, indenofluorene, heteroaryl and/or dihydrophenanthrene** as is required by the applicant's claimed invention. For this reason alone, this rejection should be withdraw. It is noted that Allen discloses that the selection of the second repeat unit could be the group "triarylamine", for the following reason:

Triarylaminers as repeating units are disclosed in Allen (see formula (1)) and according to the opinion of the Examiner, Allen also discloses polymers comprising different repeating units of formula (1), e.g. one comprising a phosphorus atom and the other comprising a nitrogen atom.

As the Examiner stated at page 9 of the office action, Oguma differs from the claimed application in that Oguma discloses a triphenylaminde derivative first repeating unit instead of a triphenylphosphine repeating unit of the applicant's formula (I). However, there is no suggestion or teaching in Oguma to modify the tripenylamine with a phosphorous atom. As stated above, Allen does not disclose copolymers comprising as a second repeat unit a unit

selected from phenyl, fluorene, spirobifluorene, indenofluorene, heteroaryl and/or dihydrophenanthrene as is required by the applicant's claimed invention.

A statement that modifications of the prior art to meet the claimed invention would have been "obvious to one of ordinary skill in the art at the time the invention was made" because the references relied upon teach that all aspects of the claimed invention were individually known in the art is not sufficient to establish a *prima facie* case of obviousness without some objective reason to combine the teachings of the references. *Ex parte Levengood*, 28 USPQ2d 1300 (Bd. Pat. App. & Inter. 1993). See MPEP § 2143.01 IV. "[R]ejections on obviousness cannot be sustained by mere conclusory statements; instead, there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness." *KSR International Co. v. Teleflex Inc.*, 82 USPQ2d 1385, 1396 (2007) quoting *In re Kahn*, 441 F.3d 977, 988 (Fed. Cir. 2006). Furthermore, the Examiner cannot selectively pick and choose from the disclosed parameters without proper motivation as to a particular selection. The mere fact that a reference may be modified to reflect features of the claimed invention does not make the modification, and hence the claimed invention, obvious unless the prior art suggested the desirability of such modification. *In re Mills*, 916 F.2d 680, 682, 16 USPQ2d 1430 (Fed. Cir. 1990); *In re Fritch*, 23 USPQ2d 1780 (Fed. Cir. 1992). Thus, it is impermissible to simply engage in a hindsight reconstruction of the claimed invention where the reference itself provides no teaching as to why the applicant's combination would have been obvious. *In re Gorman*, 933 F.2d 982, 987, 18 USPQ2d 1885, 1888 (Fed. Cir. 1991).

The working examples of the present application clearly demonstrate the improvements which can be achieved by using the polymers according to the present invention. According to the device examples of the present application, two inventive polymers have been tested, Inventive "Polymer 1" contains 15 % of units derived from "Monomer 1" and inventive "Polymer 2" contains 15 % of units derived from "Monomer 2". Both units are repeating units according to formula (I) of the present application. Comparative polymer C1 differs from both inventive polymers only in that it comprises instead of the phosphorus containing units 15 % of triarylamine units, derived from "Monomer C1". Monomer C1 would be the same type of monomer as disclosed in both Allen and Oguma.

As can be seen from the results, the polymers according to the present invention have a significantly unexpectedly larger HOMO-LUMO bandgap ( $E_g$ ) than the comparative polymer. Furthermore, the polymers according to the present invention have bluer color coordinates than the comparative polymer. These results are not obvious for a person of ordinary skill in the art. Therefore, the applicant believes that the examples clearly would establish unexpected superior results. For the above reasons, these rejections should be withdrawn.

In view of the above amendment, applicant believes the pending application is in condition for allowance.

Applicant believes no fee is due with this response. However, if a fee is due, please charge our Deposit Account No. 03-2775, under Order No. 14113-00179-US from which the undersigned is authorized to draw.

Dated: September 15, 2010

Respectfully submitted,

Electronic signature: /Ashley I. Pezzner/  
Ashley I. Pezzner

Registration No.: 35,646  
CONNOLLY BOVE LODGE & HUTZ LLP  
1007 North Orange Street  
P. O. Box 2207  
Wilmington, Delaware 19899-2207  
(302) 658-9141  
(302) 658-5614 (Fax)  
Attorney for Applicant